## NEW ABSTRACT

The invention relates to anAn arrangement for influencing magnetic particles in a region of action. With with the help of an arrangement—that has means for generating magnetic fields, by which there is generated—in this case a spatially inhomogeneous magnetic field having at least one zone—(301) in which the magnetization of the particles is in a state of non-saturation, whereas it is in a state of saturation in the remaining zone. By moving the—said zone within the region of action, a change in magnetization is produced that can be detected from outside in a first mode of operation and gives information on the spatial distribution of the magnetic particles in the region of action. In a second mode of operation, the movement is repeated so frequently that the region of action heats up.

Fig. 2